

## What is Claimed is:

1. A paper pickup mechanism located on one side of a feeding paper tray, comprising:

a driver gear for receiving rotational power transmitted from a driving power source having a pivoted axle;

- 5 an idler gear engaged with the driver gear having a rotation axis connecting to the rotation axis of the driver gear through a first linkage bar;

a swing arm having a pivoted end and a swing end, the swing arm being rotatable around the pivoted end;

- 10 a pickup gear located on the swing end of the swing arm to engage with the idler gear when the idler gear is driven by the driver gear; and

a pickup roller being coaxial with the pickup gear and driven by the driver gear to rotate in paper feeding direction to generate a torque to exert a force on a paper located on the top of the feeding paper tray.

- 15 2. The paper pickup mechanism of claim 1, wherein the driver gear is located between the pickup roller and the driving power source.

3. The paper pickup mechanism of claim 1, wherein the idler gear and the driver gear are interposed by an intergear which engages respectively with the idler gear and the driver gear.

4. The paper pickup mechanism of claim 3, wherein the intergear is pivoted on the first linkage bar.

- 20 5. The paper pickup mechanism of claim 1, wherein the rotation axis of the pickup gear and the rotation axis of the idler gear are linked through a second linkage bar for engaging with each other.

6. The paper pickup mechanism of claim 5, wherein the idler gear and the pickup gear are interposed by an intergear which engages respectively with the idler gear and the pickup gear.

- 25 7. The paper pickup mechanism of claim 6, wherein the intergear is pivoted on the second

linkage bar.

8. The paper pickup mechanism of claim 1, wherein the driver gear is located on an inner side of the feeding paper tray.

9. The paper pickup mechanism of claim 1, wherein the driver gear is mounted on an axle strut located on an inner side of the feeding paper tray.

10. The paper pickup mechanism of claim 1, wherein the driver gear is engaged with a gear set located on an outer side of the feeding paper tray, the gear set transmitting the rotational power from the driving power source to the driver gear.

11. The paper pickup mechanism of claim 1, wherein the pivoted end of the swing arm has a hollow connecting strut.

12. The paper pickup mechanism of claim 1, wherein the pivoted end of the swing arm is pivoted to an axle rod extending from an inner wall of the feeding paper tray.

13. The paper pickup mechanism of claim 1, wherein the swing end of the swing arm is extended to form a first connection plate and a second connection plate.

14. The paper pickup mechanism of claim 13, wherein the pickup gear is located on an outer side of the first connection plate.

15. The paper pickup mechanism of claim 13, wherein the pickup roller is located between the first connection plate and the second connection plate.

16. The paper pickup mechanism of claim 1, wherein the feeding paper tray is an upright paper tray.

17. The paper pickup mechanism of claim 1, wherein the feeding paper tray is a horizontal paper tray.

18. A paper pickup mechanism located on one side of a feeding paper tray, comprising:

a driver gear for receiving rotational power transmitted from a driving power source having

a pivoted axle;

an idler gear engaged with the driver gear having a rotation axis connecting to the rotation axis of the driver gear through a first linkage bar;

a swing arm having a pivoted end and a swing end, the swing arm being rotatable around the pivoted end;

5 a pickup gear located on swing end of the swing arm to engage with the idler gear when the idler gear is driven by the driver gear; and

a pickup roller being coaxial with the pickup gear and driven by the driver gear to rotate in paper feeding direction to generate a torque to exert a force on a paper located on the top of the feeding paper tray;

10 wherein the driver gear is located between the pickup roller and the driving power source.

19. The paper pickup mechanism of claim 18, wherein the rotation axis of the pickup gear and the spindle of the idler gear are connected through a second linkage bar for engaging with each other.

20. The paper pickup mechanism of claim 18, wherein the idler gear and the driver gear are  
15 interposed by an intergear which engages respectively with the idler gear and the driver gear.